2

<u>CLAJMS</u>

- An apparatus for managing call billing records of communications
- 2 network users, comprising:
- a communications network operative to carry user calls;
- 4 a gateway communicating with the network and operative to collect
- 5 call billing data from the network in a first data structure format;
- 6 a communication link coupled to the gateway; and
- 7 a network processor communicating with the gateway via the
- 8 communication link and operative to receive the collected call billing data in the
- 9 first data structure format and convert the collected call billing data from the first
- data structure format to a second data structure format.
 - 2. The apparatus of claim 1 wherein the gateway comprises a signaling gateway.
 - 1 3. The apparatus of claim 1 wherein the network processor comprises
 2 an interface that mates with the communication link.
 - 1 4. The apparatus of claim wherein the network processor polls the
 - 2 gateway to collect the collected call billing data in the first data structure
 - 3 format.



- 5. The apparatus of claim 1 wherein the first data structure format comprises raw ASG call event records (CERs).
- 1 6. The apparatus of claim 1 wherein the second data structure format
- 2 comprises data in a Bellcore automatic message accounting (AMA) format
- 3 (BAF).

Sho My

- 7. The apparatus of claim 1 further comprising a data network
- 2 communicating with the network processor, and configured to receive the call
- 3 billing data in the second data structure format for billing processing.

El 2

3

- 8. The apparatus of claim 7 wherein the data network comprises a local traffic system (LTS), and wherein the second data structure format comprises an industry standard automatic message accounting (AMA) format.
- 9. The apparatus of claim 1 wherein the network processor comprises a network platform.

 $\int_{0}^{2} 2$ a

- 1 An apparatus for managing call billing records for users of a
- 2 communications network/comprising:
- a network/having communications capabilities to carry user calls;

orek

5

6

3

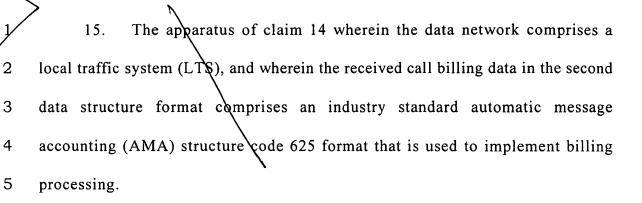
1

2

3

	signaling gateway communicating with the network and operative
to collect call	billing data resulting from the calls in a first data structure format;

- a communication link coupled to the signaling gateway; and
- a network processor communicating with the signaling gateway via
 the communication link and operative to convert the collected call billing data
 from the first/data structure format to a second data structure format conducive to
- 10 conducting billing processing.
 - 1 11. The apparatus of claim 10 further comprising a data network communicating with the network processor and operative to periodically receive the collected call billing data in the second data structure format.
 - 12. The apparatus of claim 10 wherein the network processor polls the gateway to collect the collected call billing data in the first data structure format.
 - 1 13. The apparatus of claim 12 wherein the network processor polls the 2 gateway at preset intervals.
 - Support 14. The apparatus of claim 10 further comprising a data network communicating with the network processor, and configured to receive the call billing data in the second data structure format.



1 \searrow_2 3

16. The apparatus of claim 10 wherein the network processor includes an interface coupled with the communication link operative to mate the network processor with the signaling gateway.

Subplo 1

A method of managing call billing records of users of a communications network, comprising:

3

5

providing a first computer device, a second computer device, and a

4 communication link, the first computer device communicating with the network

and the second computer devide communicating with the first computer device via

6 the communication link;

7 collecting call billing data with the first computer device in a first

8 data structure format;

9 transferring the call billing data using a data communications

10 protocol from the first computer device to the second computer device; and



converting the call billing data with the second computer device from 11

the first data structure format to a second data structure format. 12

1

The method of claim 17 wherein the first computing device is a 18. signaling gateway

- 19. The method of claim 17 wherein the second computer device is a
- 2 network processor.
- The method of claim 17 wherein the data communications protocol 1 20.
- 2 comprises a file transfer protocol.

3

21. The method of claim 17 further comprising a communication link provided between the first computer device and the second computer device.

A method/of managing call billing records generated from usage

within a communications network by users, comprising:

providing a signaling gateway communicating with the network and

- 4 a network processor communicating with the signaling gateway;
- 5 collecting call billing data with the signaling gateway in a first data
- 6 structure format



transferring the call billing data using a data communications

- protocol from the signaling gateway to the network processor; and
- 9 converting the call billing data with the network processor from the
- 10 first data structure format to a second data structure format conducive to
- 11 processing billing information.



23. The method of claim 22 further comprising routing call billing data for a user via the network processor to a data network.

- 1 24. The method of claim 22 further comprising generating an invoice
- 2 from the data network for delivery to individual users.

25. The method of claim 22 wherein the data communications protocol

- 2 comprises a file transfer protocol.
- 1 26. The method of claim 22 wherein a communication link is provided
- 2 between the signaling gateway and the network processor.

